## APPENDIX 1 - PENDING CLAIMS

1. A method of screening for an oxysterol that activates LXRα mediated transcription, comprising the steps of:

   (a) introducing a reporter construct and an LXRα expression construct into a host cell, wherein transcription of said reporter construct is activated when an oxysterol activator of LXRα binds to the LXRα protein;

   (b) treating the host cell with a candidate oxysterol activator of LXRα; and

   (c) determining whether said candidate activates LXRα mediated transcription of said reporter construct,

   wherein activation of reporter construct transcription indicates that said oxysterol activates LXRα mediated transcription.

3. The method of claim 1, wherein said LXRα expression construct is selected from the group consisting of CMX-LXRα, CMX-GAL4-LXRα and A5C-LXRα.

4. The method of claim 1, wherein said host cell is selected from the group consisting of mammalian cells and *Drosophila* cells.

5. The method of claim 4, wherein said mammalian cells are selected from the group consisting of CV1, HeLa, HepG2, COS, 293, F9, and 3T3.

7. The method of claim 1, wherein said determining step comprises a luciferase assay, a CAT assay, a beta-galactosidase assay, or measuring reporter enzyme activity.

8. The method of claim 7, wherein measuring reporter enzyme activity comprises using a luminometer, a spectrophotometer or thin layer chromatography.

17. The method of claim 1, wherein said candidate oxysterol activator of LXRα is a derivative of 22(R)-hydroxycholesterol, 20(S)-hydroxycholesterol, 24-hydroxycholesterol, 25-hydroxycholesterol, 7α-hydroxycholesterol or FF-MAS (follicular fluid meiosis activating substance).

18. The method of claim 17, wherein said derivative is hydroxylated on one or more carbon atoms in the cholesterol backbone of said oxysterol activator, selected from carbon atoms numbered 4, 7, 20, 22, 24, 25, 26 or 27 (FIG. 2B).

20. A method of screening for an oxysterol that activates LXRα mediated transcription, comprising the steps of:

(a) providing a host cell comprising a reporter construct and an LXRα expression construct, wherein transcription of said reporter construct is activated when an oxysterol activator of LXRα binds to the LXRα protein;

(b) treating the host cell with a candidate oxysterol activator of LXRα mediated transcription; and

(c) determining whether said oxysterol activates LXRα mediated transcription of said reporter construct,

wherein activation of reporter construct transcription indicates that said oxysterol is an activator of LXRα mediated transcription.

21. A method of screening for an oxysterol that activates LXRα mediated transcription, comprising the steps of:

(a) providing a host cell comprising a reporter construct and an expression construct, said expression construct comprising a gene encoding an LXRα protein, wherein transcription of said reporter construct is activated when an oxysterol activator of LXRα binds to the LXRα protein;

(b) treating the host cell with an oxysterol; and

(c) determining whether said oxysterol activates LXRα mediated transcription of said reporter construct,

wherein activation of reporter construct transcription indicates that said oxysterol activates LXRα mediated transcription.

22. The method of claim 21, wherein said oxysterol is a derivative of 22(R)-hydroxycholesterol, 20(S)-hydroxycholesterol, 24-hydroxycholesterol, 25-hydroxycholesterol, 7α-hydroxycholesterol or FF-MAS (follicular fluid meiosis activating substance).

23. The method of claim 22, wherein said derivative is hydroxylated on one or more carbon atoms in the cholesterol backbone of said oxysterol, selected from carbon atoms numbered 4, 7, 20, 22, 24, 25, 26 or 27 (FIG. 2B).